2020 WATER & SEWER RATE UPDATE

Uxbridge Water & Sewer Commission

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Tighe&Bond

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All Requirements Met

Fully Staffed

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Large Households -vs- Small Households

Essential Use -vs- Discretionary Use

3 *Provide revenue stability & resource protection*

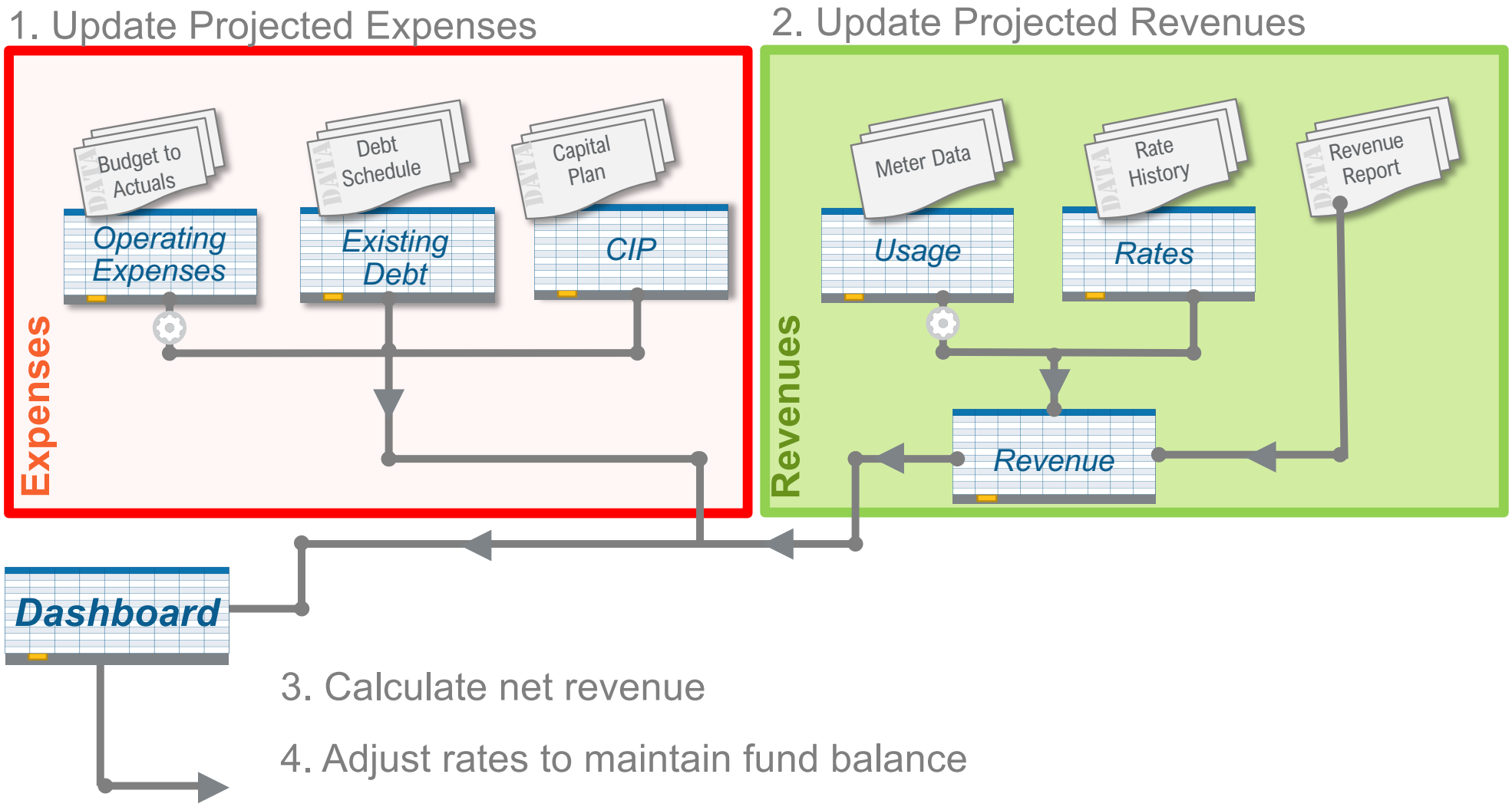
Usage Trends

Rate Design

Permit Limits

2020 UPDATE: *METHODOLOGY*

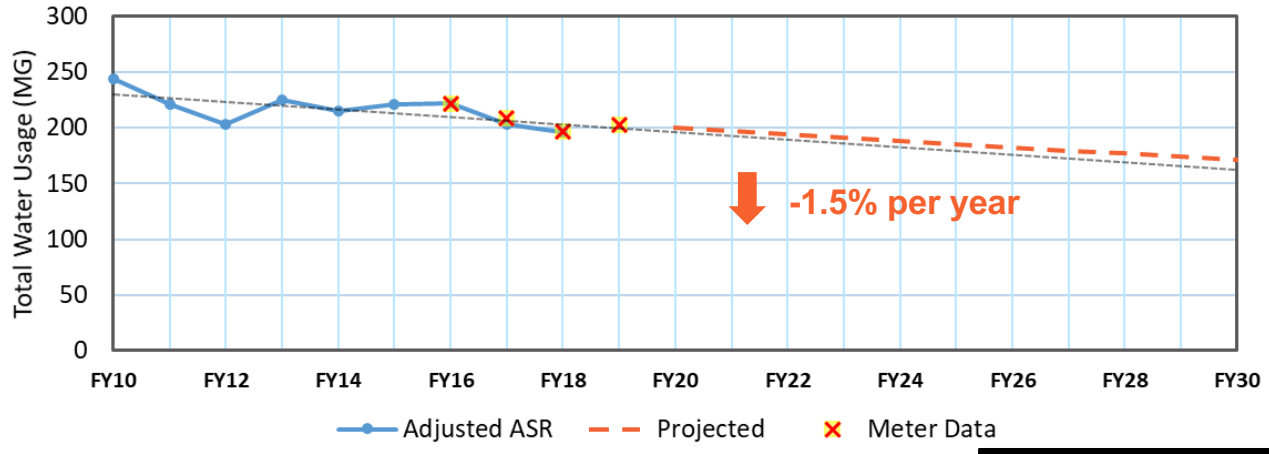
Update Previously Developed Water & Sewer Financial Models



2020 UPDATE: *WATER USAGE EVALUATION*

Water usage accounts for 60% of billed revenue for sewer and 80% of water, it also accounts for 70-80% of a residential water or sewer bill. Future revenue projections for the water and sewer enterprises are based upon the projected water usage.

Water Use Trends

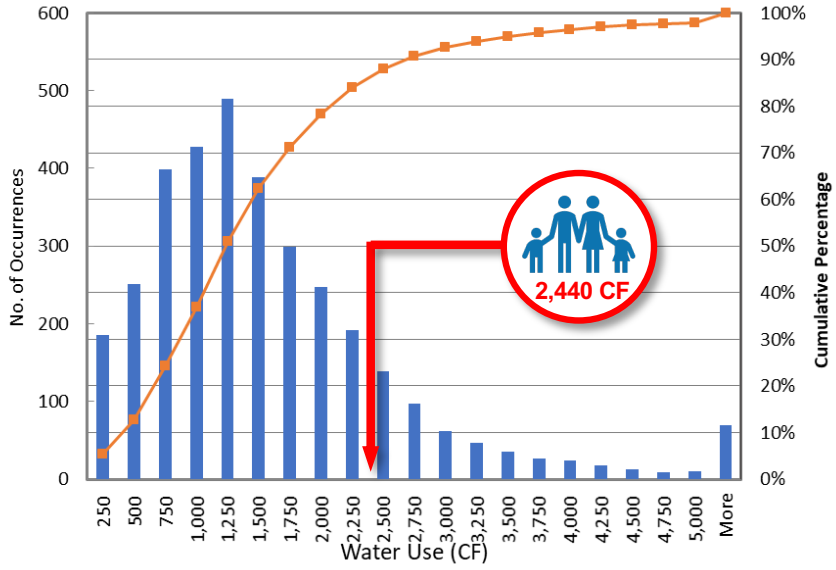


Water usage has been trending downwards for the last decade, the projected revenues are based on a conservative projections of future usage.

Determining usage for customer cost evaluations

Costs are based upon recommended "Typical Residential Customer' profile of 50 gallons per person per day for a 4 person household. This equals 2,440 cubic feet per quarter. The chart on the right is based on actual water bill data. While Uxbridge's actual reported residential use is very close at 46 gallons per person per day, the most common usage is about half of the typical customer indicating a higher percentage of smaller households. For reference, the State's water conservation goal is 65 gallons per day.

Residential Water Use Patterns: Winter Quarter FY19



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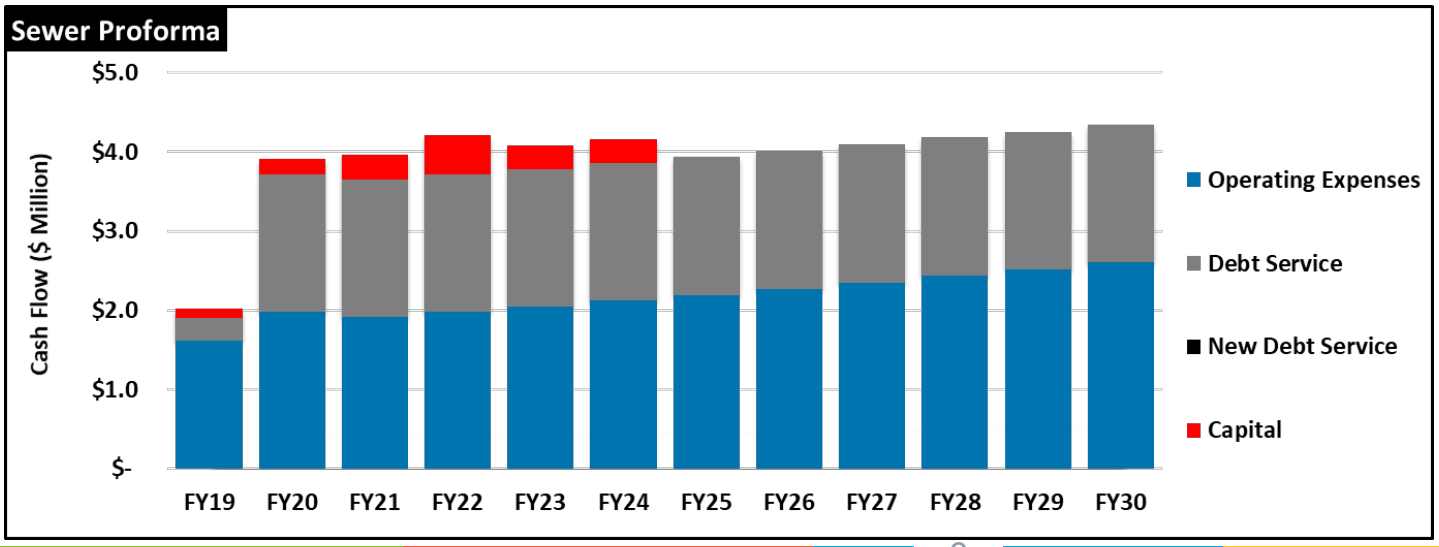
2020 UPDATE: *SEWER EXPENSES*

Expense Analysis and Trending

Category	Trends	Average 5 Year	% Change 5 Year	Average 3 Year	% Change 3 Year	Budget Utilization 3 Year	FY20 Budget	FY21 Budget	Escalator
Labor		$ 480,922	6%	$ 502,097	7%	94%	$ 705,857	$ 741,012	3.5%
Miscellaneous		$ 220,633	9%	$ 238,032	5%	87%	$ 322,265	$ 288,550	3.5%
Capital		$ 288,601	45%	$ 328,606	15%	74%	$ 200,000	$ 314,334	3.5%
Supplies		$ 157,122	8%	$ 159,511	18%	98%	$ 182,200	$ 176,700	3.5%
Technical Services		$ 325,117	20%	$ 217,184	-29%	78%	$ 141,419	$ 51,200	3.5%
Operations and Maintence		$ 229,584	5%	$ 222,450	14%	82%	$ 530,365	$ 554,540	3.5%
Indirects		$ 365,664	-5%	$ 355,500	-11%	83%	$ 100,000	$ 100,000	3.5%
						Total (w/o Debt)	$2,182,106	$ 2,226,336	

Capital Improvement Plan

ID	System	Scope	Description	Funding Source	Estimated Cost	Fiscal Year	Term
1	Enterprise	Equipment	Replacement for Landfill Mover	Rate	$150,000	2022	1
2	Enterprise	Equipment	Replacement Fail Mower Attachment	Rate	$30,000	2022	1
3	Collection	Construction	Inflow/Infiltration Engineering and Construction	Rate	$900,000	2022	3
					$1,080,000		



Key Points

1. **Debt**
   Debt service for WWTP upgrade project begins in FY20. There is a minor drop in debt service in FY29.

2. **Operating Expenses**
   Operating expenses are projected based upon *budgeted* values. The budget utilization represent the amount of unspent budget.

3. **Capital Improvements**
   The Capital Improvement Plan is modest and may not reflect the total needs of the system. Project 3 serves as a placeholder until I&I study is complete.

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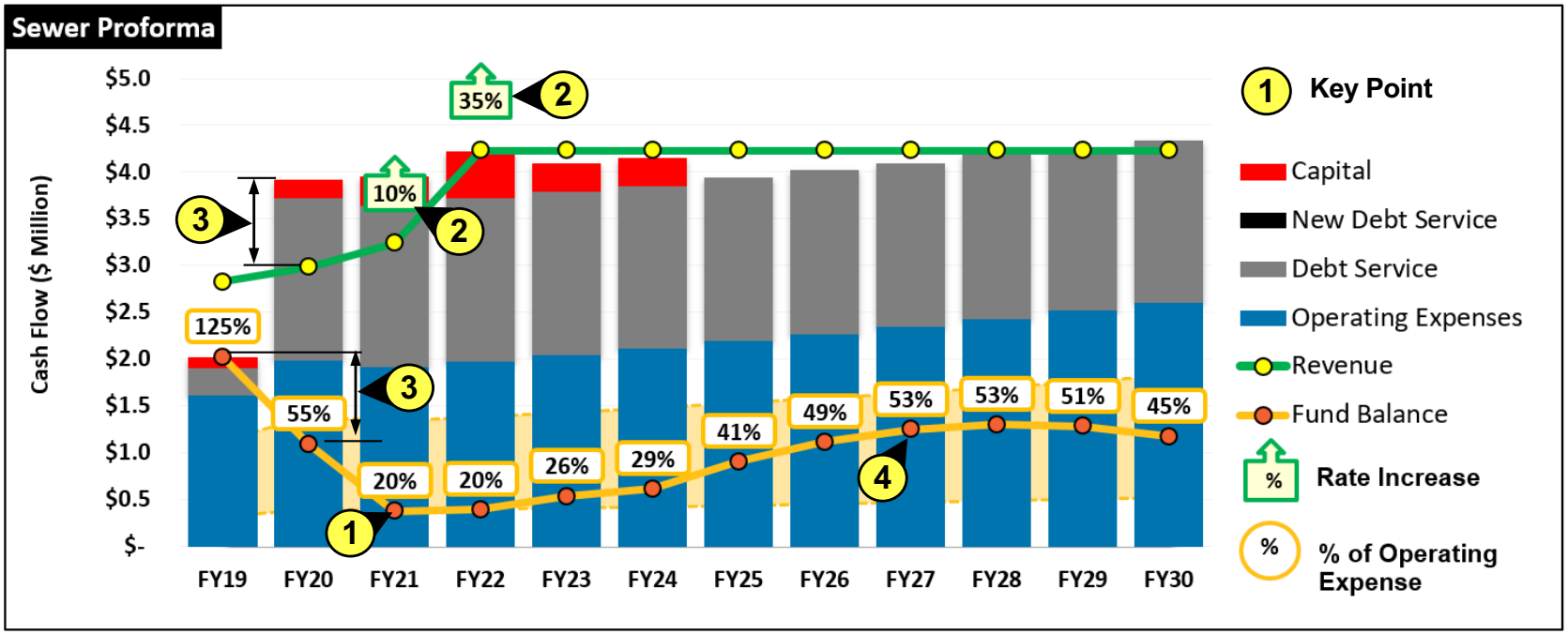
2020 UPDATE: *SEWER REVENUE & RATES*



Key Points

1. Fund balance is key indicator, rates are adjusted to maintain minimum (20%) balance.
2. 20% rate increase projected in FY19 update, revised to push back increase.
3. WWTP debt service start drives expenses above revenue, dropping fund balance by same amount.
4. Fund balance increases will be absorbed by future CIP projects resulting from I&I study.

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2020 UPDATE: *WATER EXPENSES*

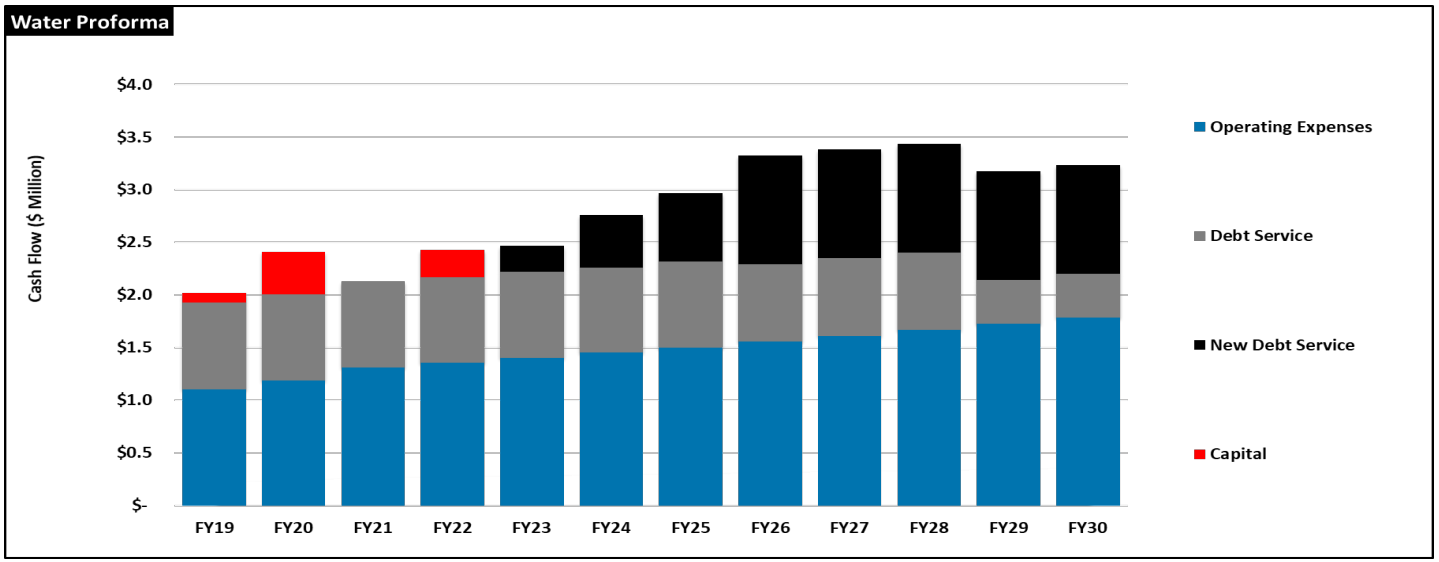
Expense Analysis and Trending

Category	Trends	Average 5 Year	% Change 5 Year	Average 3 Year	% Change 3 Year	Budget Utilization 3 Year	FY20 Budget	FY21 Budget	Escalator
Labor		$ 405,077	6%	$ 428,112	3%	87%	$ 616,719	$ 551,629	3.5%
Miscellaneous		$ 24,474	38%	$ 30,547	-26%	82%	$ 73,474	$ 53,400	3.5%
Capital		$ 27,243	--	$ 39,062	135%	7%	$ 400,000	$ -	3.5%
Supplies		$ 166,503	-3%	$ 166,424	0%	88%	$ 205,500	$ 180,000	3.5%
Technical Services		$ 94,680	16%	$ 62,826	58%	181%	$ 26,419	$ 50,000	3.5%
Operations and Maintenance		$ 194,072	5%	$ 175,159	-3%	25%	$ 266,820	$ 266,640	3.5%
Indirects		$ 905,027	7%	$ 948,896	16%	138%	$ -	$ 207,841	3.5%
							$ 1,588,932	$ 1,309,510	**2.5%**

Capital Improvement Planner

Project	System	Scope	Description	Funding Source	Interest Rate	Estimated Cost	Fiscal Year	Term
3	Distribution	Eng.+Const.	Phase I-2-Mendon Street (Route 16)	Debt	4.5%	$1,347,000	2023	20
5	Distribution	Eng.+Const.	Phase I-3 High Street and Connection to Douglas Street	Debt	4.5%	$2,273,000	2024	20
50	Distribution	Eng.+Const.	Oak & Granite Street Water Main Replacement	Debt	4.5%	$1,375,000	2025	20
52	Distribution	Eng.+Const.	East Street Water System Improvements	Debt	4.5%	$3,200,000	2026	20
55	Enterprise	Vehicle	Dump Truck	Rate	--	$150,000	2022	1
48	Source	Construction	Water Well Rehabilitation	Debt	4.5%	$1,250,000	2023	20
49	Source	Engineering	Well Rehabilitation/NewSource Development Study	Rate	--	$50,000	2022	1
53	Treatment	Construction	Blackstone Well Field Roofs	Rate	--	$30,000	2022	1
					Total	$9,675,000		

Water Proforma



1. **Debt**
   Debt service begins to increase starting in FY23 to fund water system improvements.

2. **Operating Expenses**
   Operating expenses are projected based upon *budgeted* values. The budget utilization represent the amount of unspent budget.

3. **Capital Improvements**
   The Capital Improvement Plan is based upon 2014 Water System Evaluation Study and subject to change pending results of 2020 Water System Evaluation.

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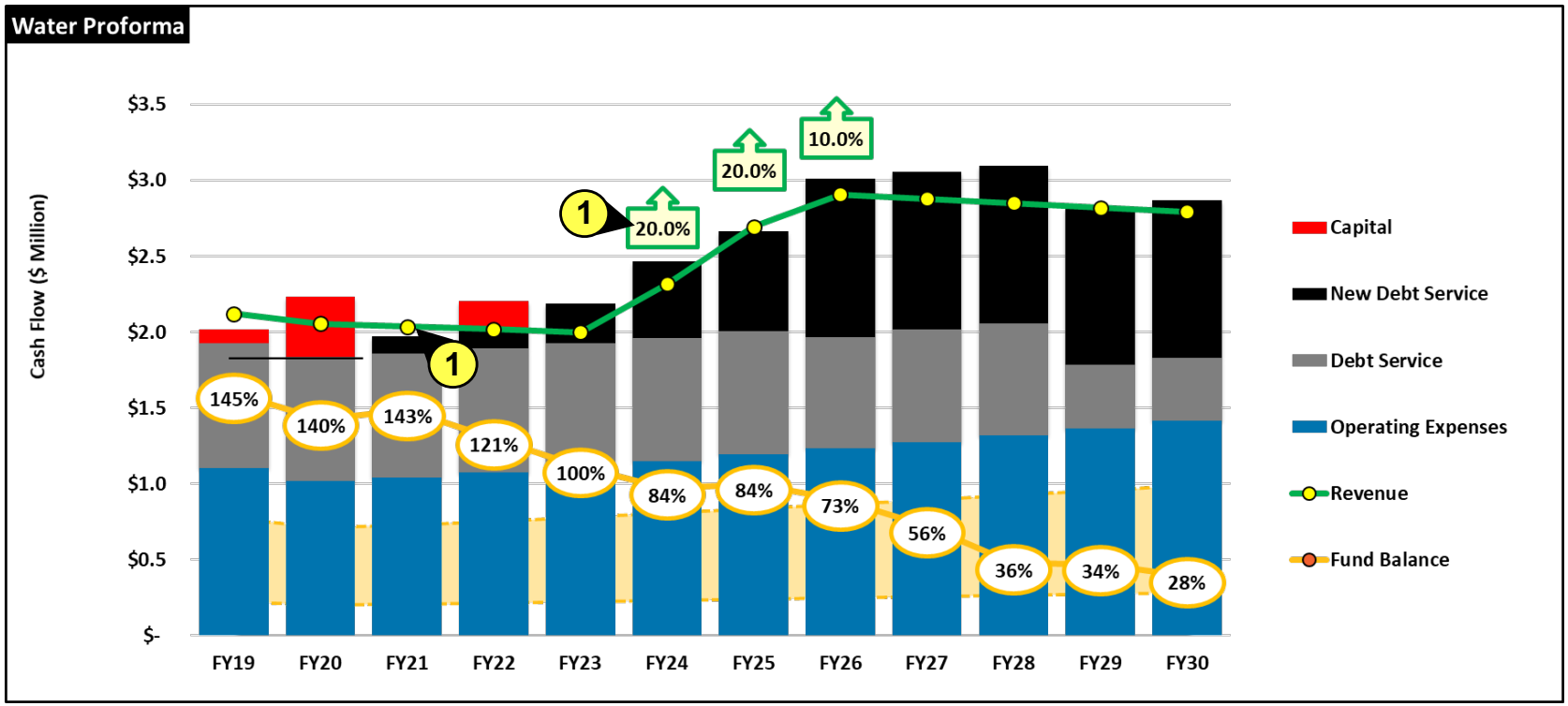
2020 UPDATE: *WATER REVENUE & RATES*



Key Points

1. To avoid additional customer impacts next year, the previously projected rate increase of 20% in FY20 was pushed back to FY24. Rate increases build upon each other however, and the result of pushing rate increases back requires higher increases later.

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RATES AND CUSTOMER COSTS

Typical Residential Customer Impacts

Calculations based on 5/8" meter customer costs

Quarterly Bill

Scenario	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Water	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02	$ 141.02
Sewer	**$ 451.42**	**$ 451.42**	**$ 496.56**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**	**$ 670.36**
Total	**$ 592.44**	**$ 592.44**	**$ 637.58**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**	**$ 811.38**
Increase		*$ -*	*$ 45.14*	*$ 173.80*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*

Annual Cost

Scenario	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Water	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09	$ 564.09
Sewer	**$ 1,805.68**	**$ 1,805.68**	**$ 1,986.25**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**	**$ 2,681.43**
Total	**$ 2,369.77**	**$ 2,369.77**	**$ 2,550.34**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**	**$ 3,245.53**
Increase		*$ -*	*$ 180.57*	*$ 695.19*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*

Sewer Rates

Description	Type	FY19	FY20	FY21	FY25	FY30
Base Charge	Quarterly Fee	$99.86	$99.86	$109.85	$148.29	$148.29
Usage	Usage	$15.98	$15.98	$17.58	$23.73	$23.73
Flat Rate	Quarterly Fee	$260.00	$260.00	$286.00	$386.10	$386.10

Water Rates

Description	Type	FY19	FY20	FY25	FY30
5/8"	Quarterly Fee	$25.00	$25.00	$36.00	$39.60
3/4"	Quarterly Fee	$37.50	$37.50	$54.00	$59.40
1"	Quarterly Fee	$62.50	$62.50	$90.00	$99.00
1.5"	Quarterly Fee	$125.00	$125.00	$180.00	$198.00
2"	Quarterly Fee	$200.00	$200.00	$288.00	$316.80
3"	Quarterly Fee	$375.00	$375.00	$540.00	$594.00
4"	Quarterly Fee	$625.00	$625.00	$900.00	$990.00
6"	Quarterly Fee	$1,250.00	$1,250.00	$1,800.00	$1,980.00
Tier 1	Usage	$2.86	$2.86	$4.12	$4.53
Tier 2	Usage	$5.68	$5.68	$8.18	$9.00
Tier 3	Usage	$8.27	$8.27	$11.91	$13.10
Irrigation	Usage	$9.69	$9.69	$13.95	$15.35

Typical Residential Customer costs are primarily driven by metered water use.

Sewer: 72% usage fees
Water: 82% usage fees

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AFFORDABILITY

Based upon the two leading affordability measures the financial burden on the typical residential user is low now and low to moderate 10 years from now.

Affordability - Financial Burden Indicators

Residential Indicator: Total Annual Cost as % Median Household Income (MHI)

Scenario	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Total	2.3%	2.3%	2.5%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%

Housefold Burden Indicator (HBI): Total Annual Cost as % Lowest Quintile Income (LQI)

Scenario	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Total	5.7%	5.7%	6.2%	7.9%	7.9%	7.9%	7.9%	7.9%	7.9%	7.9%	7.9%	7.9%

The Residential Indicator was introduced in 1997 by the EPA to help assess the financial impacts of sewer separation projects. Since then it has been coopted for use with water and stormwater. A residential indicator greater than 4% is considered to be a high burden while 2% or more is a medium burden. This methodology has long been criticized for its reliance on the MHI which is not considered a good gauge of community economics.

In response the Household Burden Indicator (HBI) was introduced in 2019. It is similar to the residential indicator but divides the cost by the LQI which is the lowest 20th percentile income in the community. The burden is determined by using the HBI and the Poverty Prevalence Indicator (PPI) (see chart) to determine the burden.

Household Indicator Assessment

16%

7.9%

HBI – Water Costs as a percent of income at LQI	PPI Percent of Households below 200% of FPL		
	>=35%	20% to 35%	< 20%
>= 10%	Very High Burden	High Burden	Moderate - High Burden
7% to 10%	High Burden	Moderate - High Burden	Moderate - Low Burden
< 7%	Moderate - High Burden	Moderate - Low Burden	Low Burden

Uxbridge Specific Data

Median Household Income = $101,859
Lowest Quintile Income = $41,214
Poverty Prevalence Indicator
Pop. <200% Federal Poverty Level (FPL): 2,225 = 16%
Total population with poverty status: 13,712

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